

MATONIN, P.K.; LAZAREV, G.A.

Reconstruction of Mine No.38 of the "Karagandaugol'" Combine.  
Ugol' 39 no. 6:15-17 Je'64 (MIRA 17:7)

1. Glavnnyy inzh. kombinata Karagandaugol' (for Matonin). 2.  
Glavnnyy inzh. shakhty No.38 kombinata Karagandaugol' (for  
Lazarev).

FIOLETOV, A.A., inzh.; LAZAREV, G.B., inzh.

Variable frequency generator using transistors. Energ. i  
elektrotekh. prom. no.3:16-18 J1-S '65. (MIRA 18:9)

L 8829-65 ENT(d) Pg-4/Pg-4/Pg-4/Pk-4/P1-4 IJP(c)/SSD/ASD(a)-5/AFETR/AFTC(p)  
AFRDC/ESD(dp) BC S/0102/64/000/004/0010/0014  
ACCESSION NR. AP4042952

AUTHOR: Lazarev, G. B. (L'vov)

TITLE: On determining the stability region for automatic control systems with random parameters

SOURCE: Avtomatika, no. 4, 1964, 10-14

TOPIC TAGS: automatic control system, structurally stable system, parametric stability region, structural parameter, Neymark method

ABSTRACT: A method of determining the stability region of structurally stable automatic control systems with smoothly varying, random structural parameters is proposed on the basis of Yu. I. Neymark's method (Avtomatika i telemekhanika, no. 3, 1948). The essence of the method consists in determining in the plane of the structural parameters the stability region, called the region of parametrical stability, which would be common to all possible combinations of parameters. The characteristic equation of the system is taken in the form

$$K_1 Q(p) + K_2 R(p) + S(p) = 0.$$

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ACCESSION NR: AP4042952

where  $Q$ ,  $R$ , and  $S$  are polynomials,  $p\frac{dx}{dt}$ , and  $K_1$  and  $K_2$  are the structural parameters for which the region of stability is sought. Upper and lower bounds for  $K_1$  and  $K_2$  are established and equations of four curves establishing the regions of parametrical stability are derived. Particular cases are presented in which less than four parametric curves are necessary to determine the stability region. The method proposed is applied to the determination of parametrical stability regions for control systems with a time delay. It is noted that the method can be extended to systems with other forms of characteristic equations. Orig. art. has: 13 formulas and 4 figures.

ASSOCIATION: none

SUBMITTED: 24Jan63

ATD PRESS: 3106

ENCL: 00

SUB CODE: MA, AS

NO REF Sov: 005

OTHER: 001

Card 2/2

L 22112-66

ACC NR. AP6012982

SOURCE CODE: UR/0091/65/000/009/0003/0006

AUTHOR: Vetrov, Yu. A. (Engineer); Lazarev, G. B. (Engineer)

47  
13

ORG: none

TITLE: Ionic self-excitation device of the TGV-200 turbogenerator of the Zmiyevskaya hydroelectric power station

SOURCE: Energetik, no. 9, 1965, 3-6

TOPIC TAGS: ion source, hydroelectric power plant, power generating station, circuit design

ABSTRACT: Ionic excitation devices (basic systems for generator excitation) have been constructed for the 200 MW TGV-200 turbo-generators of the Zmiyevskaya hydroelectric power station (GRES). The article presents the circuit diagram of the ionic self-excitation device, its power supply circuit diagram, describes in considerable detail the operation of the device, and reports on the performance of the device during continuous commercial operation. The systems responded satisfactorily to various cases of short-circuiting. They are fast, need low control power, and are able, in most cases, to supply the needed excitation boosting during brief short circuits. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 10, 09 / SUBM DATE: none

UDC: 621.313.322-81

Card 1/1 BK

L 34876-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC  
ACC NR: AR6014182

SOURCE CODE: UR/0271/65/000/011/A016/A016

AUTHOR: Lazarev, G. B.

TITLE: Automatic-system design with limited plant information

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 11A113

REF SOURCE: Sb. Materialy radioelektron. i elektr. mashiny. L'vov, L'vovsk. un-t,  
1964, 114-121

TOPIC TAGS: automatic control, automatic control system, automatic control theory

ABSTRACT: The design of automatic systems is considered when the source data is limited to approximate dynamic models obtained from experiments. Usually, several approximate models (as a rule, three) are obtained from experimental data for various process conditions; the controller adjustment is set in such a way that the transient process satisfy definite requirements of each plant model. An assumption is investigated that the system would have a similar behavior under intermediate condition. The conditions are determined under which the automatic system design based on such a plant information will be correct. The system stability is investigated. Bibliography of 11 titles. V. M. [Translation of abstract]

SUB CODE: 13, 09

UDC: 62-505

Card 1/1 myj5

L 09255-67 EPT(d)/EPT(v)/EPT(v)/EPT(k)/EPT(h)/EPT(l) IJP(c) E.I./M

ACC NR: AP6029941

SOURCE CODE: UR/0413/66/000/015/0103/0103

INVENTORS: Savinskiy, Yu. E.; Sklyarov, L. P.; Dreyzin, A. I.; Lazarev, G. F. 54

ORG: none

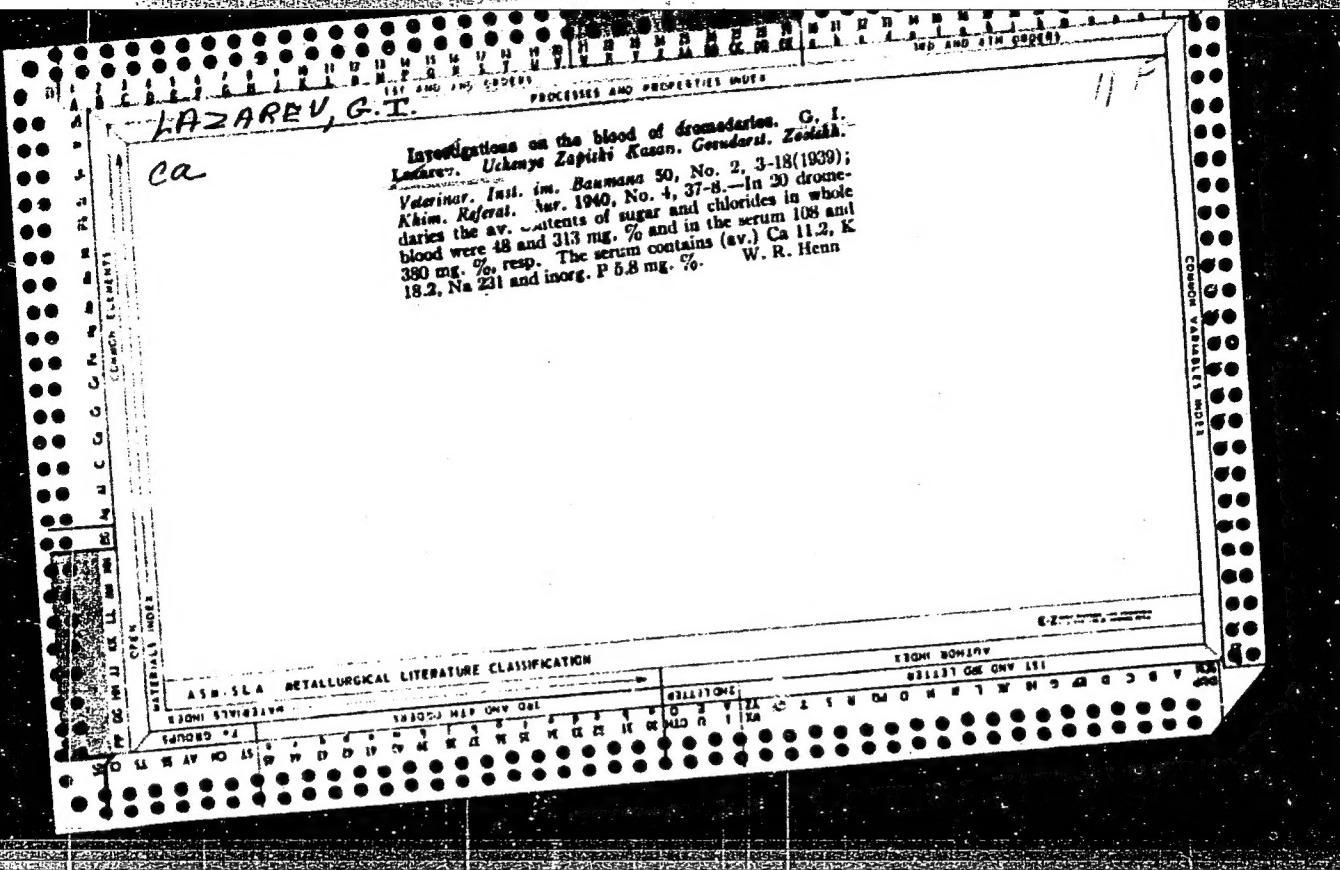
TITLE: A stand for dynamic and strength testing of automatic pitch controls of a helicopter. Class 42, No. 184497 26

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 103

TOPIC TAGS: helicopter, dynamic stress, fatigue test, endurance test, vibration test, test equipment, test method, test stand

ABSTRACT: This Author Certificate presents a stand for dynamic and strength testing of automatic pitch controls of a helicopter. The stand consists of a shaft supporting the driving mechanism of automatic controls and the loading mechanism with levers for the total and the cylindrical motion. The levers are connected by tie rods to the tested automatic pitch controls. To produce the vibration spectrum (in five harmonics) by external loading, and to impart a hinge moment to the helicopter blade, similar to those encountered in actual performance, to conduct the combined fatigue and strength tests, and to simplify the construction of the stand, a revolving experimental automatic pitch control and the traverse with torsion bars are mounted on the shaft. One end of the bars is connected to the stand's automatic pitch controls, and the other end is connected through the traverse to the tested automatic pitch control.

Card 1/1 SUB CODE: 01/13 SUBM DATE: 15Oct63 UDC: 620.178 629.139



LAZAREV, G.I.

Modified salivary cannula for ruminants. Fiziol.zhur. 41 no.4:  
582-583 J1-Ag '55. (MLRA 8:10)

1. Kafedra fiziologii s/kh zhivotnykh sel'skokhozyaystvennogo  
instituta, Kostroma.  
(SALIVA,  
cannule for investigation in ruminants)

LAZAREV, G.I.

Physiology of the parotid gland in the single-humped camel. Izv.  
AN Turk.SSR no.1:74-76 '56. (MLRA 9:8)

1. Kostromskoy sel'skokhozyaystvennyy institut.  
(CAMELS) (PAROTID GLANDS)

USSR / Human and Animal Physiology. Carbohydrate Metabolism.

T

Abs Jour : Ref Zhur - Biol., No 15, 1958, No. 69851

Author : Lazarev, G. I.; Firsunkova, S. Ya., Postylyakova, R. I.;  
Grivina, V. V.

Inst : Kostromsk Agricultural Institute  
Title : Conditioned Reflex Influence on the Blood Sugar Level and  
on the Formed Elements of the Blood

Orig Pub : Tr. Kostromsk. s.-kh. in-ta, 1957, No 1, 117-121

Abstract : No abstract given

Card 1/1

BELYAEV, A.I.; FIRSANOV, L.A.; VOL'FSON, G.Ye.; LAZAREV, G.I.

Effect of cathodic current density and the cryolite relation  
of electrolytes on the current efficiency in aluminum production.  
Izv. vys. ucheb. zav.; tsvet. met. 4 no.5:117-122 '61. (MIRA 14:10)

1. Krasnoyarskiy institut tsvetnykh metallov i Volkovskiy  
alyuminiyevyy zavod.  
(Aluminum—Electrometallurgy)

ACCESSION NR: AT4001237

S/3031/63/000/035/0101/0107

AUTHORS: Belyayev, A. I.; Firsanova, L. A.; Vol'fson, G. Ye.; Lazarev, G. I.; Pal'chikov, A. I.

TITLE: Obtaining ultrapure aluminum by distillation through subfluoride in a pilot unit

SOURCE: Gosudarstvennyy institut tsvetnykh metallov. Sbornik nauchnykh trudov. Moscow, no. 35, 1963, 101-107

TOPIC TAGS: ultrapure aluminum, ultrapure aluminum production, ultrahigh purity metal, ultrahigh purity metal production, ultrahigh purity aluminum, ultrahigh purity aluminum production

ABSTRACT: Apparatus for the production of ultrapure aluminum by distillation via the hypofluoride, developed at the Institut tsvetnykh metallov im. M. I. Kalinina (Institute of Nonferrous Metals) by A. I. Belyayev and L. A. Firsanova (Trudy Mintsvetmetzoloto im. M. I. Kalinina, no. 33, 1960) is described briefly. In this method the purified aluminum is brought in contact with vapor-

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ACCESSION NR: AT4001237

ized aluminum fluoride at 1050° and residual pressure  $10^{-1}$ -- $10^{-2}$  mm Hg. The produced aluminum hypofluoride is decomposed into pure aluminum and aluminum fluoride which is returned to the cycle. During the course of the trials of the aluminum distillation technology, conditions were found under which large aluminum ingots of specified shape can be produced in the condenser, with simultaneous production of the return condensate ( $\text{Al} + \text{AlF}_3$ , with small amount of disperse aluminum). Tests with the pilot plant have shown the possibility of producing by this method superpure aluminum (99.999%) in amounts up to 1 kg a day. The aluminum obtained in the pilot plant was found suitable for production of semiconductor rectifiers, since the siluminum produced from it has less than 0.0001% Fe, 0.0006% Mg, and 0.0001% Cu. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Gosudarstvenny\*y institut tsvetny\*kh metallov (State Institute of Nonferrous Metals)

Card 2/32

MINKUS, B.A., kand.tekhn.nauk, dotsent; BARENBOYM, A.B., inzh.;  
LAZAREV, G.I., inzh.; SHTEYNBERG, I.B., inzh.

Use of radiators in boiling and condensing liquids in tubes.  
Izv.vys.ucheb.zav.; energ. 7 no. 4:104-108 Ap '64. (MIRA 17:5)

1. Odesskiy tekhnologicheskiy institut pishchevoy i kholodil'noy  
promyshlennosti (for Minkus, Barenboym, Lazarev). 2. Penzenskiy  
dizel'nyy zavod (for Shteynberg).

L-13525-65 ENG(j)/ENP(e)/ENT(m)/EPE(c)/EPD/~~EMP(t)~~/ENP(l) Pr-4/Ps-4 JD/  
ACCESSION NR: AP4011287 MM/NH 8/0136/64/000/001/0047/0054

AUTHOR: Vigarovich, V. N.; Krapukhin, V. V.; Chernomordin, I. F.; Vol'fson,  
G. Ye.; Lazarev, G. I.; Pal'chikov, A. I.

TITLE: Conditions for obtaining high-purity aluminum by zone refining 14

SOURCE: Tsvetnye metally\*, no. 1, 1964, 47-54 17 B

TOPIC TAGS: aluminum, aluminum refining, zone refining, high purity aluminum,  
aluminum zone refining

ABSTRACT: Experiments were conducted on four grades of aluminum: AB000 (0.003%  
Fe; 0.002% Si; 0.005% Cu -- total impurities < 0.01%); AB0000 (0.001% Fe;  
0.001% Si; 0.001% Cu -- total impurities < 0.004%); intermediate-purity aluminum  
(0.0016-0.0022% Fe; 0.0013-0.0014% Si; 0.0006-0.0008% Cu); and aluminum purified  
by the subfluoride distillation method. Impurity content was determined by  
spectral analysis, and overall estimation of purity by measurement of the residual  
electrical resistance of the aluminum at the temperature of liquid helium. It was  
found that high-purity aluminum can be obtained by zone refining, and that resis-  
tance heating is better than induction heating when working with graphite boats. 15

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L 13328-63

ACCESSION NR: AP4011287

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end in vacuum. Vacuum degassing of the aluminum lowers the Mg content while reducing the effectiveness of zone refining. Aluminum with a lower content of impurities from the transition metals of the IVa, Va, and VIA groups was obtained by remelting the "dirty" ends of the test samples, with additional zone refining. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: MM

NO REF Sov: 008

ENCL: 00

OTHER: 004

Card

2/2

AYGISTOVA, S.Kh.; LAZAREV, G.L.; TIMERKAYEVA, Z.P.

Analysis of the operation of a high-frequency electric desalting unit  
on field No.1 of the Oil Field Administration of the Al'metyevsk  
Petroleum Trust. Nefteprom. delo no.9;19-23 '63. (MIRA 17:4)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut i  
Nefteprom'slovoye upravleniye "Al'met'yevneft".

67799

18.7100

SOV/180-59-5-9/37

AUTHOR: Lazarev, G.P. (Moscow)

TITLE: Influence of Cyclic Heat Treatment on Changes of Dimensions of Specimens of Aluminium and Armco-Iron

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 5, pp 57-58 (USSR)

ABSTRACT: In this investigation 100 x 25 x 1-5 mm plates of 99.998% aluminium and 100 mm long, 1-10 mm diameter cylinders of armco iron were tested on an automatic cyclic heat treatment machine (Ref 1). Test conditions were: a) 400-20 °C for aluminium, 600-20 and 750-20 °C for iron, b) cycle duration for iron specimens 5 mm and over in diameter was 12 minutes, for all others it was 6 minutes. Results for 250 cycles are shown in Figs 1 and 2 for aluminium and iron, respectively. Fig 1 shows percentage changes in dimension for aluminium as functions of thickness (curves 1, 2 and 3 for length, width and thickness, respectively). Fig 2 shows percentage changes in length of armco-iron specimens as functions of diameter for test-temperature cycles of 600-20 °C (curve 1) and 750-20 °C (curve 2). Further

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67799

SOV/180-59-5-9/37

Influence of Cyclic Heat Treatment on Changes of Dimensions of  
Specimens of Aluminium and Armco-Iron

tests on the influence of diameter were carried out on  
100-mm long conical armco iron specimens with base  
diameter of 10 mm marked at 10 mm intervals along their  
length. After tests parts of the central zone showed  
no change in the inter-mark distances, in the thin zone  
distances increased and in the thick zone they  
decreased. The author concludes that the effect of  
cyclic heat treatment depends both on the type of  
crystal lattice and on the length/diameter (or thickness)

Card ratio.  
2/2 There are 2 figures and 2 Soviet references.

ASSOCIATION: Institut tsvetnykh metallov, Moskva  
(Non-ferrous Metals Institute, Moscow)

SUBMITTED: April 27, 1959

25(2)

SOV/32-25-3-40/62

AUTHOR:

Lazarev, G. P.

TITLE:

Machine to Test Materials With Respect to Thermal Fatigue  
(Mashina dlya ispytaniy materialov na termicheskuyu ustalost')

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 357-358 (USSR)

ABSTRACT:

An automatically operating universal machine was constructed which is applicable to thermal treatment of samples of any form (Fig 1). The machine has a thermo-regulator of the EPD-12-type and permits thermal treatment in an inert atmosphere. Experiments showed that tests in the case of heating the surface of the sample up to a certain temperature show the most favorable effect, as short operation cycles are possible and conditions are found which approach reality most closely. The influence of a cyclic thermal treatment upon the variation of the dimensions was investigated in the case of aluminum (99.998%), zinc (99.99%) and Armco-iron samples. The experimental results show (Table, p 357) that in the case of the aluminum and zinc samples length and width were increased by the thermal treatment and the thickness reduced, whereas in the case of Armco-iron length and width of the sample decreased

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SOV/32-25-3-40/62

Machine to Test Materials With Respect to Thermal Fatigue

and the thickness increased. A diagram of these changes is given dependent on the number of working cycles (Fig 2). In addition to this an investigation was carried out of the influence of the dimensions of the samples upon the effect caused by thermal treatment. The most marked change of dimensions was observed in thin aluminum samples. There are 2 figures and 1 table.

ASSOCIATION: Moskovskiy institut tsvetnykh metallov i zolota im. M. I. Kalinina (Moscow Institute of Nonferrous Metals and Gold imeni M. I. Kalinin)

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86941

S/149/60/000/006/016/018  
A006/A001

18-1000 1045, 2308, 1413

AUTHOR: Lazarev, G. P.

TITLE: On the Mechanism of Deformation of Round Specimens Under Conditions of Cyclic Heat Treatment

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, 1960, 3,  
No. 6, pp. 149-152

TEXT: When specimens are subjected to cyclic heat treatment their deformation depends on a series of factors such as the type of the crystalline lattice, the shape and dimension of the specimen, and conditions of heat treatment. Due to the combined effect of these factors, a determination of the mechanism of deformation is rather difficult. The author attempts to explain the behavior of round specimens subjected to cyclic heat treatment. He considers any round specimen whose axial surface is much longer than its radial surface as consisting of two or more concentric layers. If these layers are connected with each other to form a whole, like in compact specimens, the change of their dimensions will depend on the effect of the crystalline lattice of the specimen metal and its shape. If the layers are sufficiently thin and not connected with each other, the basic factor will be the

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86941  
S/149/60/000/006/016/018  
A006/A001

On the Mechanism of Deformation of Round Specimens Under Conditions of Cyclic Heat Treatment

structure of the crystalline lattice of the specimen metal; the dimensions of the specimen will not exert a considerable effect on deformation. To confirm this concept, a series of tests were made. Aluminum rods, 100 mm long, were subjected to 300 6-minute cycles of heat treatment at  $500 \rightarrow 20^{\circ}\text{C}$ . Aluminum foil, 0.07 mm thick was rolled into 100 mm high specimens of 3.6 and 5.3 mm in diameter, which were tested during 250 cycles at  $400 \rightarrow 20^{\circ}\text{C}$ . It appeared that in spite of the different diameter of the specimens only the two external layers were deformed to almost an equal degree (Fig. 2). Comparing the results of tests made with compact and layered specimens it appears that the increase in length of layered specimens exceeds that of compact samples by more than 8 times. This explained by the fact that in case of a layered structure any mechanical connection of the layers is absent, excluding the effect on deformation of shape and dimension. In compact specimens this factor can be simultaneous or opposite to that of the crystalline lattice structure which may reduce the total effect of deformation. The distribution of deformations was studied on two-layer specimens made of Armeo iron cores and aluminum jackets, and on compact aluminum specimens, subjected to 150 cycles of heat treatment at  $550 \rightarrow 20^{\circ}\text{C}$ . The tests show that for iron-core-specimens the

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S/149/60/000/006/016/C18  
A006/A001

On the Mechanism of Deformation of Round Specimens Under Conditions of Cyclic Heat Treatment

deformation of each individual section is different with respect to magnitude and not constant in its direction. Total deformation increases with a higher number of heat treatment cycles. Middle sections are most deformed, sometimes until cracking, the ends are least deformed. Tests with compact specimens show analogous results. The shape of iron cores of 2-layer specimens did not change, but the cores were displaced upwards and protruded from the jacket to 10 - 25 mm (Fig. 6). This is explained by the fact that the immersion of one end into a cooling medium causes the consecutive cooling of individual longitudinal sections. The lowest end is freely reduced and the middle portion is reduced on account of the expanding heated upper portion; the top portion is freely reduced during cooling, so that the middle portion is the most deformed one. The consecutive reduction of the sections due to directed cooling and to the more rapid cooling of the external aluminum layer makes the external layer slide off the internal one. Studies of the macrostructure of specimens showed that the grain size changed considerably, increasing after 150 cycles from 0.1 to 10.0 - 12.0 mm. The largest grains corresponded to the most deformed sections. The aluminum core of a brass specimen was reduced from 105 to 72 mm length after 650 cycles at 400 $\rightarrow$ 20°C. Due to the

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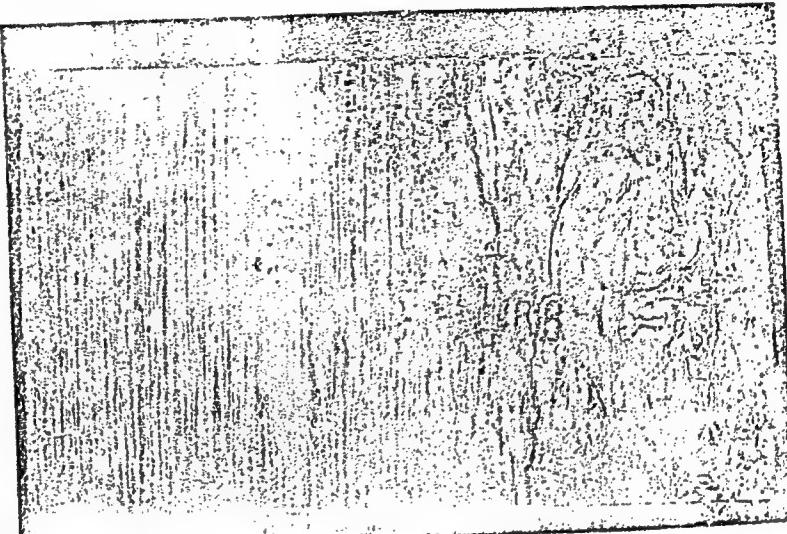
A006/A001

On the Mechanism of Deformation of Round Specimens Under Conditions of Cyclic Heat Treatment

expansion of the core diameter the brass layer disrupted (Fig. 7). The experiments described provide a number of data on the mechanism of deformation of round specimens by cyclic heat treatment.

Figure 2:

A photograph of layered specimens in unfolded state after 250 heat treatment cycles at  $400 \rightarrow 20^{\circ}\text{C}$ .



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A006/A001

On the Mechanism of Deformation of Round Specimens Under Conditions of Cyclic Heat Treatment

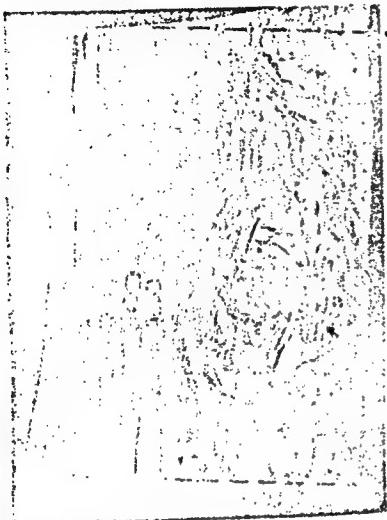


Figure 2 continued.

Figure 5:

Cracks on the surface of a specimen which appeared after 150 heat treatment cycles (2.5 x 1 scale)

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Figure 6:  
Two-layer  
specimen after  
the test.

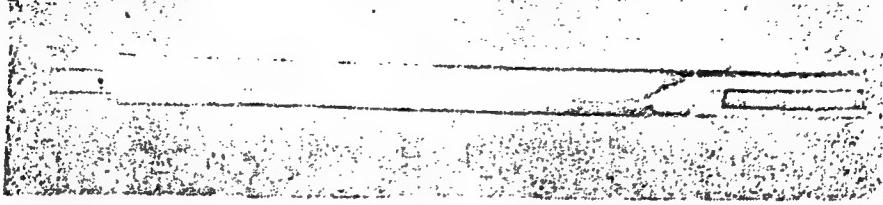
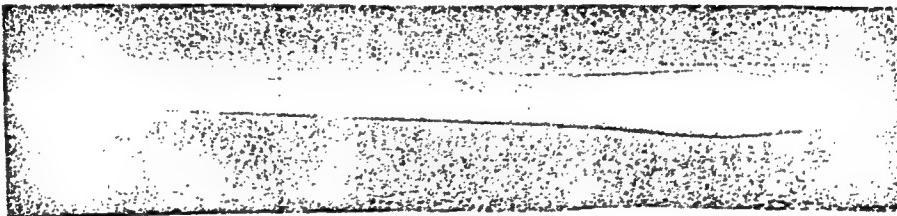


Figure 7:  
View of a speci-  
men with an  
external layer  
(d = 5 mm) made  
of brass with an  
aluminum core  
(d = 2 mm) after  
650 heat treatment  
cycles at 400  $\leftrightarrow$   
20°C.



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86941

S/149/60/000/006/016/018  
A006/A001

On the Mechanism of Deformation of Round Specimens Under Conditions of Cyclic Heat Treatment

There are 7 figures and 2 Soviet references.

ASSOCIATION: Krasnoyarskiy institut tsvetnykh metallov (Krasnoyarsk Institute of Non-Ferrous Metals) Kafedra metallovedeniya (Department of Metal Science)

SUBMITTED: March 4, 1960

X

Card 7/7

45225

S/806/62/000/003/001/018

18.100  
AUTHORS: Bochvar, A. A., Sviderskaya, Z. A., Lazarev, G. P.

TITLE: Effect of the purity of the parent metal on the heat-resistance of an alloy.

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniye splavov tsvetnykh metallov. no. 3. 1962, 5-11.

TEXT: Earlier investigations of the senior author and others (Akad. n. SSSR, Otd. tekhn. nauk, no. 2, 1954, 42-45 and 46-51) have shown that the heat-resistance of an alloy can be either enhanced or lowered by identical impurities present in different proportion, depending on whether the solidus T is raised or lowered by the predominant impurity. Matters become yet more complicated when the impurities form readily fusible components in the alloy and reduce the solidus T sharply, whereupon some of the heat-resistance (HR) characteristics, such as the long-term hardness, on which the properties of thin boundary layers have little effect, may not be altered, whereas the fundamental HR characteristics (long-term stress-rupture limit and fracture time at a given tensile stress) may be reduced to a mere fraction. The present paper describes tests intended to clarify the effect of impurities on the HR of the parent metal, in which two series of Al-Cu alloys were prepared: Series I based on 99.99% pure Al and Series II based on ordinary technical

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Effect of the purity of the parent metal ...

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Al (99.7% Al, 0.11% Fe, 0.13% Si). Two sets of HR tests were made: (1) Long-term hardness (LTH) was determined by 1-hr loading of a 10-mm diam steel ball under a 100-kg load at 300°C; (2) stress-rupture strength (SRS) was determined by the failure time under a 1.5-kg/mm<sup>2</sup> stress at 300°. The tests were preceded by 100-hr soaking at test T. In both tests the technical-Al alloy was found to be significantly stronger than the pure-Al alloy. The effects of an introduction of Cu were overshadowed by those of the Fe and Si, since the latter affect the structure of the alloy and the recrystallization processes therein. Metallographic observations are reported and depicted photographically. Specimens cast onto a cold plate exhibited a dendritic structure which became more sharply defined as the amount of impurities increased. Also, the purer Al (99.99% and 99.999%) develops two mutually intersecting networks of crystallite boundaries, whereas the 99.7% Al manifests only a single such network. Although the cooling of the cast metal proceeded very quickly, the recrystallization occurred extremely fast (of the order of 1 mm/sec) in the purest Al, but appeared to be effectively inhibited by even a 0.3% total of impurities. It was thus postulated that the changes in heat-resistance were somehow related to the recrystallization process. Tests with casting done on a plate heated to 300°C did not effect any noticeable development of the recrystallization process in the 99.7% Al, but accelerated it appreciably in the 99.999% Al. Casting of two Al-Cu alloys on a cold plate produced practically identical single-network structures, but

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Effect of the purity of the parent metal ...

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casting on a plate heated to 300°C resulted in a single network in the alloy based on 99.7% Al, but two intersecting networks in the alloy based on 99.99% Al. Conclusion: 0.3% Fe-Si impurities improve the heat-resistance of technical Al more than 4% Cu in high-purity Al. It could be reasoned that, since diffusion processes during recrystallization and creep develop especially intensively along the boundaries of the subdivisions of a structure, an increase in the number of grains and subgrains (total boundary surface) would increase the creep (decrease heat-resistance). Actually, however, the comminution of the dendritic structure accompanying an increase in impurities results in the opposite effect. Thus, evidently, the creep-stimulating effect of the branching of the dendrites in a more impure alloy is more than matched by some other, creep-inhibiting, change. It is hypothesized that this change consists in a concentration of the impurity atoms or alloying-substance atoms near the boundaries of the dendritic and subdendritic subdivisions which alters the composition amplifications on this basic hypothesis are adduced. There are 4 figures, 2 tables, and 4 references (the 2 Russian-language Soviet references adduced in Card 1/3 of the Abstract; 1 German: Vogel, R., Zeitschr. f. anorg. und allgem. Chemie, v. 126, 1923, 1; and 1 French: Montariol, Publ. Scient. Techn. du Ministère de l'Air, no. 344, 1958).

ASSOCIATION: None given.

Card 3/3

LAZAREV, G.S. (Voronezh)

Calculation of a pressure water conduit with optimum hydraulic considerations and a varying consumption rate. Izv.AN SSSR.  
Otd.tekh.nauk. Energ. i avtom.no.5:139-141 S-0 '60.

(Hydraulic engineering)

(MIRA 13:11)

LAZAREV, G.S.

Method for hydraulic calculation of pressure pipelines with alternating  
pressure losses. Izv. vys. ucheb. zav.; neft' i gaz 3 no.10:105-  
112 '60. (MIRA 14:4)

1. Voronezhskiy politekhnicheskiy institut.  
(Pipelines- Hydrodynamics)

MALIKOV, F.P.; LAZAREV, G.S.; PAKHOMOV, V.V.

New units for cooling metal-cutting tools. Mashinostroitel'  
no.9:33-34 S '63. (MIRA 16:10)

(Metal-cutting tools--Cooling)

LAZAREV, G.S., general-major voyak svyazi; P'YANOV, M.F., podpolkovnik

Role of sergeants in the education and training of personnel.  
Vest. protivovozd. obor. no.6:53-56 Je '61. (MIRA 14:8)  
(Military education)  
(Russia--Army--Noncommissioned officers)

ZOTOV4, L.K.; LAZAREV, G.S.; DEDUSHENKO, N.I.

Investigating the performance of cutting tools having multifaced  
hard-alloy bits. Stan. i instr. 36 no.6:33-35 Je '65.  
(MTRA 18:8)

L 41089-66 JW/WE

ACC NR: AP6027625

SOURCE CODE: UR/0145/66/000/006/0072/0077

AUTHOR: Lazarev, G. S. (Candidate of technical sciences; Docent)

45  
B

ORG: none

TITLE: The effect of forced vibrations on the disintegration of a jet

SOURCE: IVUZ. Mashinostroyeniye, no. 6, 1966, 72-77

TOPIC TAGS: jet, fuel injection, injector, atomization, jet breakup, ~~disintegration~~ VIBRATION EFFECT

ABSTRACT: The effect of vibrations on the disintegration of a liquid jet was studied theoretically and experimentally. Equations were derived for the variations in a jet radius in the presence of vibrations. The experimental study was made in an assembly containing a glass nozzle 0.5 to 1.2 mm in diameter which was placed in a plastic tube mounted in a holder connected to a mechanical vibrator (up to 10,000 cps). The disintegration of the horizontal water jets was recorded photographically. When the vibrations were in resonance with the natural frequency of the jet, the non-disintegrated section of the jet was shortened by a factor of 2.5. Forced vibrations with frequencies differing from the natural frequency or its multiples had little effect on jet disintegration. It is concluded that forced nozzle vibrations with resonance frequencies can be used in praxis to intensify atomization processes. Orig. art. has: 5 figures.

[PV]

SUB CODE: 211 SUBM DATE: 07Oct64/ ORIG REV: 006/ ATD PRESS: 5055

Card 1/1 *lwd* UDC: 621.43

L 7002-66 EWT(1)/T/EED(b)-3 IJP(c) GW

ACC NR: AP5026788

SOURCE CODE: UR/0286/65/000/017/0072/0073

AUTHOR: Lazarev, G. V. <sup>14,5</sup>

ORG: none

TITLE: A stereophotogrammetric instrument. Class 42, No. 174378  
<sup>28,44,5</sup>

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 72-73

TOPIC TAGS: cartography, geographic instrument, photogrammetry, surveying instrument  
<sup>44,55,12</sup>

ABSTRACT: This Author's Certificate introduces a stereophotogrammetric instrument which contains a fixed base with an optical system, a movable carriage with photograph holders, and a computer for correcting the coordinates of points on aerial photographs. Measurement accuracy is improved and the speed of the instrument is increased by using computer components, e.g. multipliers, in the form of bellows units filled with a liquid and kinematically coupled to the correction rulers and the photograph holders.

UDC: 528.722.8

Card 1/2

0901 1737

L 7002-66

ACC NR: AP5026788

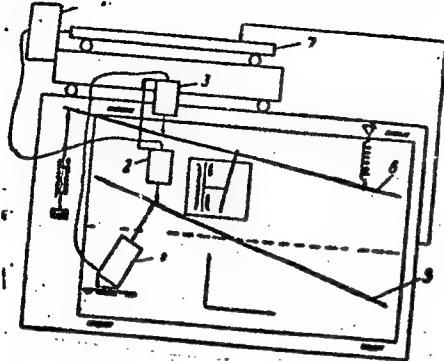


Fig. 1. 1-4--bellows units filled with  
liquid; 5 and 6--computer correction rulers;  
7--photograph holder

SUB CODE: ES/

SUBM DATE: 24Dec63/

ORIG REF: 000/

OTH REF: 000

<sup>BW</sup>  
Card 2/2

LAZAREV, G. YE.

USSR/ Engineering - Materials

Card 1/1 Pub. 124 - 11/30

Authors : Troyanovskaya, G. I., And Lazarev, G. Ye.

Title : Heat resistant friction material "RETINAKS"

Periodical : Vest. AN SSSR 25/7, 71 - 73, Jul 1955

Abstract : The development of a new heat resistant ( $1000^{\circ}\text{C}$ ) friction material called "RETINAKS", trade name FK-24A, is announced. Results obtained in testing the new material, presently used for mass production of brake-shoes, are described. Composition of the new material is not described but mention is made that one of its components is phenol-formaldehyde resin. The advantages of the Retinaks material over the 6Kh brake-shoe material are listed. It is shown that the addition of brass or soft steel filings to the Retinaks composition increases its frictional and mechanical properties at forced brake conditions.

Institution : .....

Submitted : .....

Lazarev, G. Ye.

USSR/ Engineering - Conferences

Card 1/1 Pub. 124 - 28/39

Authors : Kragel'skiy, I. V., Dr. of Tech. Sc., and Lazarev, G. Ye.

Title : Methods of testing friction materials

Periodical : Vest. AN SSSR 26/2, page 125, Feb 1956

Abstract : Minutes are presented from the conference held at the Inst. of Machine Construction of the Academy of Sc., USSR (Dec. 9-10, 1955) where the subject of testing friction materials used in brakes, clutches, and couplings of various machines was discussed.

Institution : .....

Submitted : .....

LHZAREV, G. Ye.

SHAKHMALIYEV, G.M.; LAZAREV, G.Ye.

New friction material for the draw works brake. Azerb.neft.khoz.  
35 no.9:10-11 S '56. (MLRA 9:12)  
(Oil well drilling--Equipment and supplies)

S/883/62/000/000/013/020  
E194/E155

AUTHORS: Georgiyevskiy, G.A., Lazarev, G.Ye.,  
Varlamova, V.A., and Zakharova, I.M.

TITLE: Methods of studying frictional materials

SOURCE: Metody ispytaniya na iznashivaniye; trudy soveshchaniya,  
sostoyavshegosya 7-10 dek. 1960, Ed. by  
M.N. Khrushchov. Moscow, Izd-vo AN SSSR, 1962, 119-124

TEXT: Frictional materials are usually tested on rod-on-disc  
machines in which cooling conditions are quite different from  
those experienced in practice, and as temperature is particularly  
important in assessing high temperature frictional materials it  
was taken as the main criterion in a test procedure developed by  
the Institut mashinovedeniya AN SSSR (Institute of Science of  
Machines, AS USSR). The test pieces are hollow cylinders  
(28 mm o.d., 20 mm i.d., 15 mm long); by varying the sliding  
speed (0.125 - 5 m/sec) and load (2 - 40 kg/cm<sup>2</sup>) in a friction and  
wear machine type NI-47 (I-47), frictional temperatures in the  
range 50 - 1200 °C can be developed in the specimens. Their  
housings are specially designed to control heat transfer.

Card 1/2

Methods of studying frictional ...

S/883/62/000/000/013/020  
E194/E155

A property known as the frictional thermal stability has been defined to characterise high-temperature brake materials; it includes plots of the coefficient of friction and the wear rate as functions of temperature; typical curves are shown. The development of aircraft disc brakes with enhanced cooling has involved tests on materials with varying amounts of coverage of the rotating surface by the brake blocks; it is shown how the effects of changes in this coverage depend on sliding speed. In tests of fire resistance and seizure, run-in specimens are tested at high sliding speeds until the material catches fire. Solid and gaseous wear products can be trapped for analysis. The microstructure of the frictional surfaces is studied. There are 5 figures and 1 table.

Card 2/2

LAZAREV, G.Ye.

## (4) ANTARCTIC EXPEDITION

## NAME &amp; WORK INFORMATION

SER/5666

Moskovskaya konferentsiya po problemam meteorologii Antarktiki, Moscow, 1959  
 Trudy Akad. [theses or Reports at the 1959 Conference on Meteorological Problems in Antarctica] Moscow, 1959. Moscow, Glidermechzdat  
 (Gidrometeoizdat) 1959. 47 p. 1,000 copies printed.

Ed.: O.G. Krivits; Tech. Ed.: I.M. Zaitsev.

PURPOSE: The publication is intended for meteorologists, particularly for those interested in the climatology of Antarctica.

CONTENTS: This book contains summaries of thirty-five reports presented at the Scientific Conference on Meteorological Problems in Antarctica, held in Moscow, October 26 to 28, 1959. The summaries are arranged in four groups: (1) general problems of the geography of Antarctica; (2) atmospheric circulation; (3) radiation balance, heat balance, climate and special features of individual elements; (4) methods of observation and measurements. No personalities are mentioned. There are no references.

## PAGE XII.

THE CONSTRUCTION OF INDIVIDUAL EDITIONS  
 [Candidate of Geographical Sciences, Institute of Geography  
 of USSR (Institute of Geography As well)] Formation of the Snow Cover in the Tidal Basins of Antarctica

Zaitsev, M.Ye. [Candidate of Geographical Sciences, Institute of Geography, Academy of Sciences of the Ukrainian SSR, University] Special Features of Snow Accumulation in the Tidal Basins and in the High-Plateaus Zone of Eastern Antarctica

Pushkachnik, N.G. [Engineer, Sovmetsniproekt (All-Union Association for Design and Planning of Establishments of the Ministry of the Navy of the USSR)] Volume of Glacier Ice Dumped onto the Davis Sea

Safarov, V.P. [Candidate of Physics and Mathematics, Tsentral'nyye geofizicheskiye observatory (Central Geophysical Observatory)] Radiation Balance of Some Parts of the Antarctic and Soviet Observations According to Measurements from the Dielectric Wavelet. Do. In 1959

Safarov, V.P. [Candidate of Geographical Sciences, Institute of Geography, Academy of Sciences of the Ukrainian SSR, University] Approximate Determination of the Snow and Ice Balance in the Regions Investigated by the Soviet Antarctic Expeditions [Expedition (Eastern Antarctica)]

## PAGE XIII. METHODS OF OBSERVATIONS AND MEASUREMENTS

Izotova, V.A. [Central Forecasting Institute] The Temperature Corrections in Computing the Geopotential of 700 mb Surface, According to Observations of Antarctic Stations

Safarov, V.I. [Candidate of Physics and Mathematics, Tsentral'nyye geofizicheskiye observatory] Ice-Sheet Thickness Measurements According to Geodetic Observations [Central Geophysical Observatory] Methods for Measuring Radiation Balance From All-Terrain

Slyusarev, V.S. [Central Astronomical Observatory, 1st Soviet Continental Antarctic Expedition] Methods of Measuring the Thickness of Snow in Polar Regions. [Junior Scientific Worker, Bauchno-Izobrashchenskiy glaznostno-vremenno-kopirograficheskii shaly (Scientific Research Institute of Military Topographic Service)] Contour Determination in Antarctica by the Barometric Method

Krivits, O.G. [Central Forecasting Institute] Operations for Determining Corrections by Radio Altimeter During the 2nd Soviet Antarctic Expedition

Izotova, V.A. [Central Forecasting Institute] Methods for Determining the Surface Contour of Antarctica During the 3rd Soviet Antarctic Expedition

Ogurcov, A.M. [Institute of Applied Geophysics, AS USSR] Determination of the Absolute Altitude of the Antarctica Icecap

AVAILABILITY: Library of Congress (20094-9.855)

CONFIDENTIAL

TM 100

7-1-60

USHAKOV, S.A., aspirant; IAZAREV, G.Ye., mladshiy nauchnyy soturdnik

Thickness of the earth's crust along the meridional profile  
Davis Sea - Pionerskaya Station. Inform. biul. Sov. antark. eksp.  
no.10:9-12 '59  
(MIRA 13:3)

1. Moskovskiy gosudarstvennyy universitet.  
(Davis Sea, region--Geology, Structural)

USHAKOV, S.A.; mladshiy nauchnyy sotrudnik; LAZAREV, G.Ye., mladshiy nauchnyy sotrudnik

The isostatic equilibrium of Antarctica. Inform.biul.Sov.  
antark.eksp. no.11:17-21 '59. (MIRA 13:5)

l. Moskovskiy gosudars. unnyy universitet.  
(Antarctic regions--Isostasy)

3(6)

AUTHORS:

Lazarev, G. Ye., Ushakov, S. A.

SOV/20-126-2-20/64

TITLE:

An Attempt at Determining the Thickness of Ice in the Antarctica  
From Gravimetric Data (Opyt opredeleniya moshchnosti l'da v  
Antarktide po gravimetricheskim dannym)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 2, pp 299-302 (USSR)

ABSTRACT:

The seismic determination of ice thickness must be supplemented by gravimetric measurements because of the large distances between the points of seismic probing and because of the probability of considerable errors being caused at some points. These gravimetric methods may supply valuable information with respect to the thickness of the ice. In these measurements it is necessary to separate the influence exercised by the difference in ice thickness from the influences of the lower factors. The ice profile investigated by the authors extends over a distance of 25 km from the shore of the Mirnyy-Rayon into the interior of the mainland. The points distributed on this profile at distances of 1 - 2 km from one another either coincide or are not more than 500 m distant from one another. The large difference in density ( $1.9 \text{ g/cm}^3$ ) between the core layers and the ice is very favorable for the

Card 1/3

An Attempt at Determining the Thickness of Ice in the  
Antarctica From Gravimetric Data

SOV/20-126-2-20/64

application of the gravimetric method. The investigations carried out by the authors lead to the following conclusions: 1) For the determination of the thickness of antarctic ice, gravimetric investigation must be carried out in conjunction with seismic investigations. In this way, not only exact data concerning ice thickness, but also some information concerning the structure of the crust of earth below the ice may be obtained. 2) When interpreting gravimetric data it is possible to determine the regional background by converting Buge's anomalies for height. If there is an isostatic compensation of the cover of ice on a considerable area of the eastern Antarctic, the regional background may be represented by the curve of the gravitational effect of the ice above seal level (however with changed sign). 3) Application of the method developed by B. V. Numerov increases the accuracy of ice thickness determination from gravimetric data. The most rational way of calculating thicknesses according to this method is by doing so for such distances between the gravimetric points as are not greater than four times the thickness of the ice. The authors thank Professors V. V. Fedynskiy, V. A. Magnitskiy, and P. A. Shumskiy for their help and advice, as well as Professor S. S. Vyalov,

Card 2/3

An Attempt at Determining the Thickness of Ice in the  
Antarctica From Gravimetric Data

SOV/20-126-2-20/64

O. K. Kondrat'yev, S. S. Lopatin, and S. A. Manilov for placing  
data concerning glaciology and seismic research at their disposal.  
There are 1 figure and 8 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: February 14, 1959 by D. I. Shcherbakov, Academician

SUBMITTED: February 12, 1959

Card 3/3

67257

~~3-(10)~~ 3.9000AUTHORS: Ushakov, S. A., Lazarev, G. Ye. SOV/20-129-4-19/68TITLE: The Isostatic Downwarping of the Earth Crust in the Antarctica Under the Load of the Icecap

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 4, pp 785 - 788 (USSR)

ABSTRACT: According to I. D. Zhongolovich (Ref 2) and Tanni the platforms are essentially isostatic in equilibrium. Up to being iced the isostatic anomalies and the anomalies averaged by Fay which are similar to the former with respect to its magnitude (according to S. V. Yevseyev (Ref 1) and H. Jeffreys (Ref 10)) must nearly be equal to zero. The radius of this averaging was assumed, according to S. V. Yevseyev (Ref 1), to be 118 km. The results obtained by the Soviet Antarctic expeditions, which the authors had available, indicate the existence of an isostatic compensation in the region under investigation. This leads to the following problem: It must be found how completely the isostatic compensation in the other investigated regions of the Antarctica are realized. According to G. P. Wollard the thickness of the rocks below the icecap varies systematically from the periphery of the Antarctica towards its center. Such a systematic variation

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67257

The Isostatic Downwarping of the Earth Crust in the      SOV/20-129-4-19/68  
Antarctica Under the Load of the Icecap

is, according to the authors' opinion, very improbable. The non-agreement between <sup>the</sup> seismic and gravimetric depth is essentially due to the downwarping of the earth crust under the weight of the ice. The existence of isostatic equilibrium in the profile extending from Little America to Byrd may be concluded from the analysis of Fay's anomalies. In the isostatic compensation of the ice load Buge's (Bouget's?) anomalies illustrate the influence exerted by the following factors: 1) The density relief of the layers below the ice. 2) The anomalies densities of the rocks under the ice. 3) The regional gravitational background due to the isostatic downwarping of the earth crust. If the excess ice load is isostatically fully compensated, Buge's anomalies, after consideration of the regional background are nothing but Fay's anomalies. Basing on this assumption the authors calculated the depths of the lower layers in the profile Little America - Byrd. The good agreement between the gravimetric and the seismic depths on the aforementioned profile confirms the assumption that the excess ice load is essentially isostatically compensated. The same also applies to the eastern part of the Antarctica. The existence of an isostatic equilibrium is also *✓*

Card 2/3

67257

The Isostatic Downwarping of the Earth Crust in the  
Antarctica Under the Load of the Icecap      SOV/20-129-4-19/68

indicated by the fact that the Antarctic shelf is, on the average, 200 m lower than the shelves of other continents. The minimum of Fay's anomalies in the Pacific sector is pointed out. The cause of such anomalies has, as yet, not been found. It is further mentioned that the authors thank V. V. Fedynskiy, V. A. Magnitskiy, and P. A. Shumskiy for discussing this paper, and that they also thank O. K. Kondrat'yev, S. S. Lopatin, and S. A. Manilov for making the data of seismic probing available. There are 2 figures and 14 references, 9 of which are Soviet.

PRESENTED: May 4, 1959, by D. I. Shcherbakov, Academician

SUBMITTED: April 29, 1959

Card 3/3

42239

S/732/61/019/000/00

AUTHOR: Lazarev, G. Ye.

TITLE: Special problems in the astronomical determination of coordinates in  
the Antarctic.SOURCE: Sovetskaya antarkticheskaya ekspeditsiya, 1955- . [Trudy] t. 10:  
Vtoraya kontinental'naya ekspeditsiya, 1956-1958 gg.; gliatsiologiche-  
skiye issledovaniya. P. A. Shumskiy, ed. Leningrad. Izdatel'stvo  
"Morskoy transport," 1960, 11-21.TEXT: This is a report on operational experience in establishing astronomical  
fixes in marine and aerial navigation under Antarctic conditions, which is a part of  
the glaciological records of the Second Soviet Continental Expedition, 1956-1958,  
to Antarctica. Under the strong wind prevailing in clear weather in Antarctica, as  
well as in the Arctic, broken-ocular instruments are most convenient, since they  
enable the observer to protect his eyes and face from the penetrating freezing  
wind and to make astronomical observations at any zenith distance. Under  
extremely intense and variable conditions of prevailing brightness, a revolving  
magazine-type disk with three colored filters permits rapid change of filter  
density. The level attached to the vertical circle is most seriously affected by

Card 1/2

42240  
S/732/60/010/000/002/002

1...0  
AUTHOR: Lazarev, G. Ye.

TITLE: Barometric leveling in Antarctica.

SOURCE: Sovetskaya antarkticheskaya ekspeditsiya, 1955- . [Trudy] t. 10:  
Vtoraya kontinental'naya ekspeditsiya, 1956-1958 gg.; glyatsio-  
logicheskiye issledovaniya. P. A. Shumskiy, ed. Leningrad.  
Izdatel'stvo "Morskoy transport," 1960, 27-36.

TEXT: Barometric leveling has been widely applied in Antarctica. The prevalence of strong winds requires a correction for the slope of the constant-pressure surfaces. The effect of the horizontal temperature gradient on observations near a sloping ground surface, which at first sight appears to be a serious difficulty, can be eliminated by calculation because of the stability of the prevailing temperature inversions. Pressure variations resulting from synoptic dynamic phenomena are greatest in the coastal area (Mirnyy, Oazis), with winter extremes of 668 - 626 mb and summer extremes of 655 - 632 mb. Mean monthly temperatures at inland stations are below 0°C the year round, with little summer-to-winter difference. Temperatures decrease with distance from the coast. Temperature

AS  
Ca

Card 1/2

S/169/61/000/010/019/055  
D228/D304

AUTHORS:

Lazarev, G. Ye., and Shumskiy, P. A.

TITLE:

Preliminary results of gravimetric determinations of the  
ice-sheet thickness

PERIODICAL:

Referativnyy zhurnal, Geofizika, no. 10, 1961, 55,  
abstract 10V364 (V sb. Sov. antarkt. ekspeditsiya, 10,  
L., Morsk transport, 1960, 96-100)

TEXT: The data and procedure are given for determining the ice thickness by a gravimetric method via the comparison of gravity anomalies with the data on the depth of the ice floor obtained by means of seismic surveying and drilling. The plan position of the gravimetric stations and the radial profile of the ice sheet in the Mirnyy-Vostok area from the data of 1957 are cited. It is noted that the sub-ice surface of the central part of Eastern Antarctica has a bowl shape, the edge of the ice sheet extruding seawards for 200 km. The existence of a latitudinal range under the ice is postulated in an area of 220 .. 300 km. The greatest

Gard 1/2



Preliminary results of...

S/169/61/000/010/019/053  
D228/D304

thickness of the ice sheet was noted 40 km to the north of the Vostok station and was equal to approximately 4700 m, the floor of the ice in this area being located almost 1250 m below sea-level. The analysis of errors in the gravimetric method for the original data in question was made with certain a priori assumptions. The errors do not exceed 100 m.  
*[Abstracter's note: Complete translation.]*

Card 2/2

S/035/61/000/006,032/044  
A001/A101

AUTHOR: Lazarev, G.Ye.

TITLE: Geodetic works in the region of oasis Banger-Hills

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 6, 1961, 2, abstract 6G3 (V s". "Sov. antarkt. ekspeditsiya. 10", Leningrad, "Morsk. transport", 1960, 280 - 284)

TEXT: To determine the velocity and direction of motion of the ice cover in the region of Banger-Hills (Antarctic), a microtriangulation network was constructed and observations were carried out at its points in November 1957 and January 1958. An OTC(OIS) optical theodolite, a 20m steel tape, a pocket chronometer, and glaciological beacons with marks were used in observations. The relative error of the initial side (its length was  $\sim$  850 m) amounted to 1:4,600. Horizontal angles were measured by six circular observations with root-mean-square errors  $\pm 3''.42$  (in 1957) and  $\pm 2''.41$  (in 1958); zenith distances were determined with r.m.s. error equal to  $\pm 2''.4$ . Refraction coefficient, calculated from two-side differences in elevation, proved to be 0.35. The error in position of the remotest point was  $\pm 0.59$  m. The accuracy in determining altitudes of the points

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Geodetic works in the region of oasis Banger-Hillis

S/035/61/000/006/032/044  
A001/A101

was  $\pm 0.02$  m. The results of repeated measurements showed a relatively slight displacement of ice masses both in horizontal and vertical directions. The magnitudes of ice displacements turned out to be close to limiting measurement errors. To improve the organization of works, it is recommended to sink beacons to a depth of at least 1 m, to paint the lower part of beacons and tripod legs into white color, and repeat observations not oftener than in 3-5 months. It is noted that the OIS theodolite is well fitted for observations under Antarctic conditions.

I. Konopal'tsev

[Abstracter's note: Complete translation]

Card 2/2

88844

S/026/60/000/012/002/009  
A166/A027

3.9000 (1641,1109,1327)

AUTHOR: Lazarev, G.Ye.; Ushakov, S.A.

TITLE: The Earth Crust of the Antarctic

PERIODICAL: Priroda, 1960, No. 12, pp. 17 - 22

TEXT: The article gives an account of the earth crust of the Antarctic from data recorded by Soviet geophysicists in 1955 - 1958. Studies of the ice cap were made in the Eastern Antarctic from the Mirnyy observatory to the inland stations at Vostok and the Pole of Inaccessibility and also at intervals along the coastal area of the Eastern Antarctic from longitude 55 - 165°E. Seismic, gravimetric and magnetic observations have been made and an aerial survey carried out along a U-shaped route from Mirnyy-Pionerskaya-Farr Bay and also in the coastal area of Wilhelm II Land and Queen Mary's Land. Seismic studies of the thickness of the ice cap were also made in these areas and gravimetric and magnetic research performed in other coastal areas of the Eastern Antarctic. It was found that the mean thickness of the ice cap in the Eastern Antarctic varies from a minimum of 2,000 m to a maximum of 4,000 m. The figure shows the subglacial relief (top) and the thickness of the earth crust between Mirnyy and Komsomol'skaya. A subglacial upheaval detected in the central part of the West-

Card 1/5

F 3844

The Earth Crust of the Antarctic

S/026/60/000/012/002/009  
A166/A027

ern Glacier is of the fault-block type and is probably the northern end of the block mountains situated to the east of Olaf-Pruds Bay. The calm gravitational and magnetic fields detected between Mirnyy and a point 200 km towards Pionerskaya indicate that beneath this sector lies a plain with slight rises and depressions. The proterozoic foundation is overlaid with low-magnetic rocks, similar to those which compose the bed of the Davis Sea. South of the 200 km point an upheaval of the block type has been detected which, together with the Banger and Obruchev Oases and the Stratkon and Amundsen Mountains, forms a single system of upheavals stretching towards the north east. According to Soviet observations, the eastern area comprises two separate structures: King George V Land is part of a platform, while Oats' Land is probably a Caledonian fold structure with component rocks no older than 300,000,000 - 400,000,000 years. According to the values of Bouget's anomaly, determined along the meridian from the Davis Sea to Komsomol'skaya, this strip may be divided into 3 sections: 1) from the Davis Sea to 100 - 200 km from the coast is a section of transition from a typically oceanic crust to a continental crust of the continental slope type; 2) the maritime 100-km strip in the Davis Sea, and the land up to 50 km inland from Mirnyy towards Pionerskaya is a shelf zone; 3) the section between the 50-km and 1,000-km points from Mirnyy, a little to the south of Kom-

Card 2/5

LAZAREV, G.Ye., mladshiy nauchnyy sotrudnik

Methods of determining heights in Antarctica. Inform. biul.  
Sov. antark. eksp. no.35:49-52 '62. (MIRA 16:11)

1. Shestaya kontinental'naya ekspeditsiya.

LAZAREV, G.Ye., mladshiy nauchnyy sotrudnik

Using a gyrocompass for orientation on land. Inform. biul.  
Sov. antark. eksp. no.36:28-29 '62. (MIRA 16:4)

1. Shestaya Antarkticheskaya kontinental'naya ekspeditsiya.  
(Gyrocompass)

LAZAREV, G.Ye.

Trigonometric leveling along the profile Komsomol'skaya-Sovetskaya-  
Vostok-Komsomol'skaya. Geofiz. biul. no.13:49-56 '63. (MIRA 17:2)

LAZAREV, G.Ye., mladshiy nauchnyy sotrudnik

Preliminary results of the gravigeodetic expedition along the route  
Komsomol'skaya-Sovetskaya-Vostok. Inform.biul. Sov.antark.eksp. no.43:  
41-43 '63. (MIRA 17:1)

1. Institut fiziki Zemli AN SSSR im. O.Yu.Shmidta.

LAZAREV, G.Ye.; USHAKOV, S.A.

Gravity field and subglacial relief of ~~the~~ central part of eastern  
Antarctica. Dokl. AN SSSR 152 no.2:400-403 S '63. (MIRA 16:11)

1. Institut fiziki Zemli im. O.Yu. Shmidta AN SSSR i Moskovskiy  
gosudarstvennyy universitet im. M.V. Lomonosova. Predstavлено  
akademikom D.I. Shcherbakovym.

LAZAREV, G.Y.,; BULATOV, I.A., Vsero geologo-minerologicheskikh nauk

Structure of the rhythmic in the ice in the central part of  
West Antarctica. Inform. Min. Sov. antarkt. no. 4/122-32 '64.  
(MIRA 18:5)

I. Moscow: Izd. vuzovskoy universitet.

DUBOVSKOY, B.V.; LAZAREV, G.Ye., kr ., tekhn. nauk

Accuracy of determining height by terrestrial barometric leveling in Antarctica. Inform biul. Sov. antark. eksp. no.53:44-48 '65. (MIRA 18:12)

1. Nachal'nik ot dela inzhenernykh izyskanii Gosudarstvennogo proyektno-konstruktorskogo i nauchno-issledovatel'skogo instituta morskogo transporta Ministerstva morskogo flota SSSR (for Dubovskoy). 2. Shestaya sovetskaya antarkticheskaya ekspeditsiya (for Lazarev).

ACC NR: AT7013727

SOURCE CODE: UR/3174/65/000/053/0044/0048

AUTHOR: Dubovskoy, B. V. (Section head); Lazarev, G. Ye. (Candidate of technical sciences)

ORG: DUBOVSKOY Engineering Research Section, State Project Construction and Scientific Research Institute of Sea Transportation (Otdel inzhenernykh izyskaniy, Gosudarstvennyy proyektno-konstruktorskii i nauchno-issledovatel'skiy institut morskogo transporta); LAZAREV State Project Construction and Scientific Research Institute of Sea Transportation (Gosudarstvennyy proyektno-konstruktorskii i nauchno-issledovatel'skiy institut morskogo transporta); Sixth Soviet Antarctic Expedition (Shestaya sovetskaya antarkticheskaya ekspeditsiya)

TITLE: Accuracy of determination of elevations by surface barometric leveling in Antarctica

SOURCE: Sovetskaya antarkticheskaya ekspeditsiya, 1955-. Informatsionnyy byulleten', no. 53, 1965, 44-48

TOPIC TAGS: ground survey, triangulation, barometer, barometric leveling

SUB CODE: 08

ABSTRACT: In the course of trigonometric leveling along the traverse Kom-somol'skaya-Sovetskaya-Vostok in November 1961-January 1962 the accuracy of determining elevations by surface barometric leveling at stations was Card 1/2

0933 2207

ACC NR: AT7013727

determined on the basis of readings of barometric pressure and air temperature. Three aneroids with temperature compensation were used. Scale corrections were introduced. At each station pressure and temperature were observed twice: immediately upon arrival and 2-3 hours later. In this area it was found that there was no stable slope of the isobaric surface. Under such conditions barometric leveling was possible by the method of scheduled time readings at even a single meteorological station in a radius up to 500 km with a mean square error in determining elevations of not more than  $\pm 12$  m. When determining elevations by the barometric method in a radius up to 100 km from the initial station the elevations can be obtained with a mean square error of about  $\pm 5$  m. When barometric leveling is done with aneroid barometers their readings should not be taken immediately after arrival at a station, by 1-2 hours later. The accuracy of determination of elevations by barometric leveling can be increased by synchronization of observations at the initial station and at the determined stations, an increase of the number of initial stations and the use of more precise instruments than aneroids for determining barometric pressure. Orig. art. has: 1 figure and 2 tables.

[JPRS: 34,593]

Card 2/2

L 38687-66 EWT(1) GW

ACC NR: AT6016944 (A) SOURCE CODE: UR/2639/65/000/000/0053/0060

AUTHOR: Lazarev, G. Ye.; Ushakov, S. A.; Bugayev, Yu. G. (Professor)

ORG: none

44  
B-1TITLE: Methods and basic results of geodetic and gravimetric investigations of the central sector of eastern Antarctica

SOURCE: AN SSSR. Mezhdunvedomstvennaya komissiya po izucheniyu Antarktiki. Antarktika (The Antarctic); doklady komissii, 1964. Moscow, Izd-vo Nauka, 1965, 53-60

TOPIC TAGS: gravimetric survey, geodetic survey, sea ice

ABSTRACT: Measurements (begun in 1959) of the altitudes of the ice surface and the force of gravity in Antarctica are described. Absolute altitudes were calculated from the mean sea level of the Davis Sea; the Vodomerneyy bench mark, served as the basic land station. In the gravimetric survey, differences in the force of gravity were measured using several gravimeters in order to minimize observational errors. The errors along the Mirnyy-Komsomols'kaya, Komsomol'skaya-Sovetskaya-Pole of Inaccessibility, Vostok-Polyus, routes do not exceed  $\pm 2$ ,  $\pm 1$ ,  $\pm 2$ ,  $\pm 4$  mgal, respectively. The errors in the determination of the force of gravity at Mirnyy, Pionerskaya, Komsomol'skaya, Vostok, and Sovetskaya do not exceed  $\pm 2,5$  mgal. The geodetic observations show that 1) daytime is the best time for geodetic surveys because refraction is at

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L 38687-66

ACC NR: AT6016944

a minimum; and 2) the errors in the determination of mean altitude values (employing direct and reverse leveling) are of a random nature. The gravimetric data show the presence of several anomalies of positive and negative types, ranging from 30 to 100 mgal. Analysis of the data revealed the following relief zones: 1) from the coast line to 68° S, relatively small highs (up to 400 m) and small depressions (to -300 m); 2) 68°-71° S, sizable mountains (up to 1000 m) and depressions; 3) 71°-75° S and 87°-100°E, where the relief of hard rocks is almost at sea level with extreme altitude variations of +500 m to -150 m. Orig. art. has: 1 table, 2 figures.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 001

Card 2/2 LC

LAZAREV, I.

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Chemical Processing of Solid Fossil Fuels.

H.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 36306  
Author : Lazarev, I., Havel, O.  
Inst :  
Title : An Investigation of Iron Coke Production.  
Orig Pub : Paliva, 1953, 38, No 3, 265-269.

Abstract : There were carried out laboratory, pilot plant and industrial experiments on the production of iron coke (IC) from schist, into the composition of which enter coal of two formations and an ore. At the industrial experiments, 1607 tons of IC were processed, schist included 11.6% of ore; its humidity, on the average, was 12.65. It was established that the coking process took place without complications; the coke yield increased 13%, including 3% of metallurgical coke; the yield of chemical

Card 1/2

H-118

CZECHOSLOVAKIA/Chemical Technology .. Chemical Products and Their Application. Chemical Processing of Solid Fossil Fuels. H.

Abs Jour : Ref Zaur - Khirya, No 10, 1959, 36306

products decreased insignificantly. It was deduced that there existed a feasibility of an industrial introduction of this product and about the necessity of checking the effect the performance of blast furnaces has on the obtained IC.

Card 2/2

LAZAREV, I., inz.; PRUDEK, L., inz.

Proposed coal mixture for the coking plant of the Vychodoslovenske  
zalezarny. Paliva 43 no. 5:143-147 My '63.

1. Vyzkumny a zkusebni ustav, Nova hut Klementa Gottwalda,  
Koksarsky vyzkum.

LAZAREV, I., inz.

Operational test of the coal charge composed of 60 per cent  
coal from the Hlubina mine and 40 per cent from the Zapotocky  
mine. Paliva 44 no. 7:215-217 J1 '64.

1. Research and Testing Institute, Nova hut Klementa Gottwalda,  
Ostrava.

LAZAREV, I., inz.

Some technological problems of preparing the coal charge  
for coke plants. Paliva 44 no.12;359-360 D '64.

1. Research and Testing Institute of the Nya hut Klementa  
Gottwalda National Enterprise, Ostrava-Kuncice.

LAZAREV, I., Inz.

Improvement in the economical processing of coking coal.  
Paliva 45 no.1:23 Ja '65.

1. Research and Testing Institute of the Nova hut Klementa  
Gottwalda National Enterprise, Ostrava-Kuncice.

STAENIKOV, Vsevolod Nikolayevich; BARANTSEV, Vasiliy Ivanovich;  
MAL'SKIY, A.N., prof., retsenzent; LAZAREV, I.A., inzh.,  
retsenzent; KHMEL'NITSKAYA, A.Z., red.

[Processes and apparatus of food processing industries]  
Protsessy i apparaty pishchevykh proizvodstv. Moskva,  
Pishchevaia promyshlennost', 1965. 390 p.

(MIRA 18:8)

LAZAREV, I.B., inzh.

Approximation method of designing multistory frames for stability.  
Trudy NIIZH no.24:31-50 '61. (MIRA 16:5)  
(Structural frames)

LAZAREV, I.B., inzh.

Approximation design of some beams on elastic supports for stability.  
Trudy NIIZH no.24:51-76 '61. (MIRA 16:5)  
(Beams and girders)

LAZAREV, I.G., inzh.

Electric-power supply for the building site. Energ.stroi.  
no.5:63-71 '58. (MIRA 12:5)

1. Glavnny energetik Kuybyshevskoy gidroelektrostantsii.  
(Volga Hydroelectric Power Station--Electric power)

LAZAREV, I.K.

Production of high-precision flattened steel strip for engine  
piston rings. Avt. prom. 31 no.6:37-39 Je '65.

(MIRA 18:10)

1. Nauchno-issledovatel'skiy institut metiznoy promyshlennosti.

-LAZAREV, I.K.

New design of filtration screens for UV-1 coal centrifuges. Koks  
i khim. no.9:59-61 '61.  
(MIRA 15:1)

1. Nauchno-issledovatel'skiy institut metiznoy promyshlennosti,  
g. Magnitogorsk.

(Centrifuges)

LAZAREV, I.K., - inzh...

Rolling of bimetal rods with a strong steel core. Stal' 22  
no.2:145-148 F '62. (MIRA 15:2)

1. Magnitogorskiy nauchno-issledovatel'skiy institut metiznoy  
promyshlennosti.

(Laminated metals)  
(Rolling (Metalwork))

Lazarev, I.L.

AUTHOR:

Lazarev, I.L.

25-8-28/42

TITLE:

Automatic Typesetting (Avtomatushkiy nabor)

PERIODICAL:

Nauka i Zhizn', 1957, # 8, p 50 (USSR)

ABSTRACT:

The article describes the high-speed typesetting machine "Linotype-Mixer", model "Quick" which is manufactured in West Germany and which was shown on the Leipzig Fair in fall 1957. It is stated that the USSR has designed a similar machine.

There is one photograph.

AVAILABLE:

Library of Congress

Card 1/1

LAZAREV, I.M.

Primary leiomyosarcoma of the stomach. Zdravookhranenie 2  
no.3:50-52 My-Je '59. (MIRA 12:10)

1. Iz ob'yedinennoy prozektury pri gorodskoy bol'nitsy g.Bendery  
(glavnyy vrach A.N.Gerasin).  
(STOMACH--CANCER)

LAZAREV, I.M.

Periarteritis nodosa in children. Zdravookhranenie 3 no.3:27-  
32 My-Je '60.  
(MIRA 13:7)

1. Iz ob'yedinennoy prezektury pri gorodskoy bol'nitse g.  
Bendery (glavnnyy vrach A.T. Butenko).  
(ARTERIES--DISEASES)

KATSYF, A.M., kand. med. nauk; LAZAREV, I.M.

Diagnostic errors detected through pathologicoanatomical autopsy ( based on materials of the Urological Clinic of the Kishinev State Medical Institute for five years). Trudy Kish.  
gos. med. inst. 24:187-195 '64 (MIRA 18:1)

Clinical aspects of retroperitoneal phlegmons. Ibid. 8:196-201.

1. Urologicheskaya klinika Kishinevskogo gosudarstvennogo meditsinskogo instituta i patologoanatomiceskoye otdeleniye Mol-davskoy Respublikanskoy klinicheskoy bol'nitsy.

RUSSKOV, N.V.; ISHCHUKOVA, M.P.; LAZAREV, I.M. (Kishinev)

Severe course of Reiter's syndrome. Klin.med. 40 no.6:143-  
146 Je '62.  
(MIRA 15:9)

1. Iz gospital'noy terapeuticheskoy kliniki (zav. - prof. M.A.  
Polyukhov) Kishinevskogo meditsinskogo instituta (dir. - kand.  
med.nauk N.A. Testemitsanu) i Respublikanskoy klinicheskoy  
bol'nitsy (glavnnyy vrach T.V. Moshnyaga).  
(REITER'S DISEASE)

LAZAREV, I., inz.; PRUDEK, L., inz.

Use of lignite for metallurgical coke production. Paliva  
42 no.7:193-196 Jl '62.

1. Vyzkumný a zkusební ustav, Nova Hut Klementa Gottwalda,  
koksoarensky vyzkum.

LAZAREV, I., inz.; PRUDEK, L., inz.

Use of lignite for making metallurgic coke. Paliva 42 no.10:301-302 O '62.

1. Vyzkumny a zkusebni ustav, Nova hut Klementa Gottwalda, koksarensky vyzkum.

LALAREV, I. S.

"On the Possibility of Increasing the Resistance of the Organism to the Action of Harmful Environmental Factors" by K. G. Vasil'yev, I. S. Karev, Honored Worker of Science RSFSR Prof. N. V. Lazarev, Senior Scientific Associate Ye. I. Lyublina, and V. G. Ovcharov (Leningrad); Chair of Pharmacology, Pharmacy, and Pharmocognosy; Military-Medical Order of Lenin Academy imeni S. M. Kirov, and the Toxicological Laboratory of the Leningrad Institute of Labor Hygiene and Occupational Diseases; Gigiyena Truda i Professional'nyye Zabolevaniya, Vol 1, No 2, Mar/Apr 57, pp 19-24.

Reports results of experiments carried out to determine the effectiveness of dibasol and an extract of ginseng root when used to increase the resistance of the organism to the harmful environmental effects. V. G. Ovcharov used the drugs to increase the tolerance of white mice to high altitudes. I. S. Karev applied dibasol and extract of ginseng root in white mice in order to increase their resistance to the harmful effects of rarified atmosphere. K. G. Vasil'yev and Ye. I. Lyublina conducted experiments which sought the prevention of undesirable effects caused by rapid changes in the position of the organism. In all cases the application of dibasol and extract of ginseng root proved to be highly beneficial.

Scanned 1391

LITLATE V, N. V.

Experiments to determine the protective action of dibasol in intoxications were conducted by E. N. Levina and Ye. I. Lyublina in 1953. Intoxication was induced in white mice by the subcutaneous administration of manganese chloride in doses of 80 to 160 milligrams per kilogram body weight. Simultaneously dibasol was administered to the animals. Only four of the 25 experimental animals died, while 13 of a similar number of control animals perished.

Sum. 1391

LAZAREV, I. S.

S. M. Vishnyakov induced intoxication in cats by the intramuscular administration of sodium cyanide in doses of 3 milligrams per kilogram of body weight. All of the ten animals of the control group perished 8 or 9 minutes after the poison was administered. Of the ten animals which were administered dibasol prior to the administration of sodium cyanide, four remained alive. Similar results were obtained by N. K. Fruyentov in 1956 and I. I. Brekhman in 1957 in experiments on guinea pigs and rabbits which were administered extract of ginseng root after being poisoned with tetraethyl lead and tricresyl phosphate. Other preparations, such as benzimidazole derivatives, vitamin B<sub>12</sub>, and anti-cholinesterase drugs have been found to possess the capacity to raise the resistance of the organism to the effects of unfavorable conditions. As yet, however, dibasol is the most effective drug. It is now being widely applied in medical practice, produces no side effects, is inexpensive, and is also effective when administered internally.

On the basis of the data which were obtained in the experiments, the authors say in conclusion that it may be assumed that in the near future it will be possible pharmacologically to raise the resistance of the organism to adverse conditions, such as may be encountered in ocean storms, long distance flights, difficult expeditions, submarine work at considerable depths, and other difficult tasks. (U)

Scam. 1341

LAZAREV, I.S.; SEDLETSKIY, V.I.

Correlation of proved sulfur reserves based on prospecting and  
exploitation data. Razved. i okh. nedr 27 no.6:9-13 Je '61.

1. Gaurdakskiy sernyy kombinat (for Lazarev). 2. Gaurdakskaya  
geologorazvedochnaya ekspeditsiya (for Sedletskiy).  
(Sulfur) (MIRA 14:9)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000928920001-0

LAZAREV, I.Ye., inzhener; FILIPPOV, B.I., inzhener.

Precast reinforced concrete structural elements for multistory  
industrial buildings subject to heavy loading. Stroi.prom. 32 no.4:  
18-20 Ap '54.  
(Precast concrete construction)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000928920001-0"

LAZAREV, I. Z.

Nov/Dec 50

USSR/Physics - Electromagnetic Field

"Additional Multiplets in Nonhomogeneous Electric Field," V. S. Miliyanchuk, L. K. Klimovskaya, I. Z. Lazarev, Lvov State U

"Iz Ak Nauk SSSR, Ser Fiz" Vol XIV, No 6, pp 716-720

Attempt to show possibility of additional multiplets in nonhomogeneous field which are similar to additional multiplets observed in homogeneous magnetic field. Authors thank A. I. Andriyevskiy for his aid and permission to use facilities of the Phys Dept, Lvov Polytech Inst.

PA 170T90

LASER, I.Z.

Current drift through plant tissues. Biophysika 9 no. 1  
86-93 '64. (MIRA 17,7)